

CLAIMS

What is claimed is:

- 1 1. In a computer system having a display device including a display surface, a
2 method of operation comprising:
3 reserving a first portion of the display surface for exclusive use by a first
4 program; and
5 rendering contents in said reserved first portion of the display surface, by said
6 first program, excluding all other programs from using said reserved first portion of
7 display surface.
- 1 2. The method of claim 1, wherein said reserving comprises requesting a
2 window manager to switch to a display mode having a smaller pixel configuration.
- 1 3. The method of claim 2, wherein said reserving further comprises aborting a
2 responsive request by the window manager to a display device driver to configure a
3 display hardware to said smaller pixel configuration.
- 1 4. The method of claim 2, wherein said reserving further comprises pre-alerting
2 an exclusive-use display area manager of said display mode switch request to said
3 window manager.
- 1 5. The method of claim 1, wherein
2 the method further comprises determining if a first event has occurred; and
3 said reserving is performed only if the first event is determined to have
4 occurred.

1 6. The method of claim 5, wherein the method further comprises
2 determining if a second event has occurred; and
3 unreserving said first portion of the display surface for exclusive use by said
4 first program if the second event is determined to have occurred.

1 7. The method of claim 6, wherein said unreserving comprises requesting a
2 window manager to switch to a display mode having a larger pixel configuration.

1 8. The method of claim 7, wherein said unreserving further comprises aborting a
2 responsive request by the window manager to a display device driver to configure a
3 display hardware to said larger pixel configuration.

1 9. The method of claim 7, wherein said reserving further comprises pre-alerting
2 an exclusive-use display area manager of said display mode switch request to said
3 window manager.

1 10. The method of claim 1, wherein the method further comprises
2 monitoring for a request by an application to change a display mode to a full
3 screen mode; and
4 notifying said first program to temporarily stop rendering contents in said
5 reserved first portion of the display surface.

1 11. The method of claim 10, wherein the method further comprises
2 monitoring for a request by an application to change a display mode from a
3 full screen mode to a normal mode; and

4 notifying said first program to resume rendering contents in said reserved first
5 portion of the display surface.

1 12. The method of claim 1, wherein the method further comprises
2 monitoring for a request by an application to change a display mode to a full
3 screen mode; and
4 upon detecting such as request, intercepting all page flipping calls by said
5 application, and forwarding each of said page flipping calls onward only after said
6 first program has updated a back buffer.

1 13. The method of claim 12, wherein the method further comprises interacting
2 with said full screen mode requesting application to maintain said reserved first
3 portion of the display surface

1 14. In a computer system having a display device including a display surface, a
2 method of operation comprising:
3 pre-alerting an exclusive-use display area manager of a display mode switch
4 request to a window manager;
5 submitting said display mode switch request to said window manager; and
6 aborting a responsive request by the window manager to a display device
7 driver to configure a display hardware in accordance with said display mode switch
8 request.

1 15. The method of claim 14, wherein said display mode switch request is a
2 request to switch to a selected one of a smaller and a larger pixel configuration.

1 16. In a computer system having a display device including a display surface, a
2 method of operation comprising:
3 determining if a first event has occurred;
4 operating the display device with the display surface having one or more
5 exclusive use display areas whose contents are persistently visible if the first event
6 is determined to have occurred;
7 determining if a second event has occurred; and
8 operating the display device with the display surface having no exclusive use
9 display area whose contents are persistently visible if the second event is
10 determined to have occurred.

1 17. The method of claim 16, wherein said operating of the display device with the
2 display surface having one or more exclusive use display areas whose contents are
3 persistently visible further comprises accommodating an application that operates in
4 a full screen mode.

1 18. The method of claim 17, wherein said accommodating comprises temporarily
2 suspending rendering contents into said exclusive use display areas.

1 19. The method of claim 17, wherein said accommodating comprises interacting
2 with said application that operates in a full screen mode to at least partially maintain
3 said exclusive use display areas.

1 20. In a computer system having a display device including a display surface, a
2 method of operation comprising:

3 intercepting a page flipping call by an application that operates in a full
4 screen mode;
5 updating locations of a back buffer unused by said application with contents
6 to be persistently visible; and
7 forwarding said page flipping call onward after said updating.

1 21. An article of manufacture comprising:
2 a recordable medium having stored thereon a plurality of programming
3 instructions to be executed by a processor, wherein when executed, perform the
4 operations set forth in claim 1.

1 22. An article of manufacture comprising:
2 a recordable medium having stored thereon a plurality of programming
3 instructions to be executed by a processor, wherein when executed, perform the
4 operations set forth in claim 14.

1 23. An article of manufacture comprising:
2 a recordable medium having stored thereon a plurality of programming
3 instructions to be executed by a processor, wherein when executed, perform the
4 operations set forth in claim 16.

1 24. An article of manufacture comprising:
2 a recordable medium having stored thereon a plurality of programming
3 instructions to be executed by a processor, wherein when executed, perform the
4 operations set forth in claim 20.

1 ~~25.~~ An apparatus comprising:
2 a display device having a display surface;
3 a storage medium having stored therein a plurality of programming
4 instructions designed to implement a display device driver to render displays on said
5 display surface of said display device, and an exclusive use manager to cooperate
6 with said display device driver to facilitate exclusive use of at least a first sub-portion
7 of said display surface for rendering persistently visible contents; and
8 a processor coupled to the display device and the storage medium to execute
9 the programming instructions.

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1 ~~26.~~ The apparatus of claim 25, wherein the exclusive use manager is equipped to
2 receive an alert of a display mode change request from a window manager to said
3 display device driver, and in response, upon intercepting said display mode change
4 request, aborting said display mode change request.

1 ~~27.~~ The apparatus of claim 25, wherein the exclusive use manager is equipped to
2 monitor for a display mode change request to enter a full screen mode of operation
3 from an application, and in response, notifying applications associated with said
4 exclusive use display areas to temporarily suspend rendering contents into said
5 exclusive use display areas.

1 ~~28.~~ The apparatus of claim 25, wherein the exclusive use manager is equipped to
2 monitor for a display mode change request to enter a full screen mode of operation
3 from an application, and interact with said application to at least partially maintain
4 said exclusive use display areas.

1 29. The apparatus of claim 28, wherein the exclusive use manager is further
2 equipped to intercept page flipping calls by said application, and facilitating
3 rendering of contents into said exclusive use display areas by applications
4 associated with the exclusive use display areas prior to forwarding the intercepted
5 page flipping calls.

1 30. An operating system comprising:
2 a display device driver to render displays on a display surface of a display
3 device; and
4 an exclusive use manager to cooperate with said display device driver to
5 facilitate exclusive use of at least a first sub-portion of said display surface for
6 rendering persistently visible contents.

1 31. The operating system of claim 30, wherein the exclusive use manager is
2 equipped to receive an alert of a display mode change request from a window
3 manager to said display device driver, and in response, upon intercepting said
4 display mode change request, aborting said display mode change request.

1 32. The operating system of claim 30, wherein the exclusive use manager is
2 equipped to monitor for a display mode change request to enter a full screen mode
3 of operation from an application, and in response, notifying applications associated
4 with said exclusive use display areas to temporarily suspend rendering contents into
5 said exclusive use display areas.

1 33. The operating system of claim 30, wherein the exclusive use manager is
2 equipped to monitor for a display mode change request to enter a full screen mode

- 3 of operation from an application, and interact with said application to at least
- 4 partially maintain said exclusive use display areas.

- 1 34. The operating system of claim 30, wherein the exclusive use manager is
- 2 further equipped to intercept page flipping calls by said application, and facilitating
- 3 rendering of contents into said exclusive use display areas by applications
- 4 associated with the exclusive use display areas prior to forwarding the intercepted
- 5 page flipping calls.

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